

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

SUPERFUND DIVISION

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CHICAGO, IL 60604-3590

EPA Region 5 Records Ctr.



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3/23/99

DATE: March 23, 1999

SUBJECT: Review, "Addenda to Lindsay Light II Site Work Order, March 23, 1999"

FROM: Larry Jensen, CHP
Regional Radiation Expert
Emergency Response Section 3

TO: Fred Micke, On-Scene Coordinator
Emergency Response Branch
Emergency Response Section 3

I have reviewed the March 23, 1999, addenda to the March 4, 1999, Work Order. I have the following comments.

Main Text

1. **General Site Excavation Procedure Revisions, Page 3**—Two foot depths are very thick and will impede much of the sensitivity of the screening.
2. **Reference Section 4.4, Proposed Revised Text, underlined section in mid-page, Page 4**—Screening of slurry wall excavate/spoil should be done.
3. **Reference Section 4.4, Existing Text, page 4**—No explanation or SOP is given for determining how run-off will be determined to be contaminated or not.
4. **Air Monitoring Procedure, Page 5**—Changing from 4 CFM to 10 liters/min means changing from 113 liters/min to 10 liters/min, a substantial change. Can Minimum Detectable Amounts still be maintained with this much lowered collection rate?

Membrane filters are brittle while glass fiber filters are more substantial. What special precautions will be instituted to handle these brittle filters?

5. **Additional comment**—It should be explained how the background reset on the Ludlum Model 193 will be handled when staff are in protective clothing in exclusion areas. Clarify if this will present problems when staff must exit the exclusion zone to reset the meter. Clarify if background reset will be regular.

Attachment 1 for Asphalt Surveying Procedure

1. **Item 4**—No equipment should be substituted unless there is an approved SOP.

This sentence could be interpreted that there is a shortage of equipment. The contractor should assure that there is sufficient equipment that has an approved SOP.

2. **Item 5.1**—This section should assure that all asphalt not over those decontaminated areas that were filled with clean fill must be surveyed. All these materials must not be released before they are surveyed.
3. **Item 5.2**—The exact gamma meter and the exact NaI probe should be specified.

All sections of the asphalt must be surveyed, not just those that are exposed.
4. **Item 5.3**—"Representative samples" is vague. This should be explained precisely.
5. **Item 5.4.2**—Asphalt should be cleaned of all visible contamination before being crushed and sampled.

Attachment 2 for Ludlum Model 193 Monitor Use Procedure

1. **Item 2**—Reference is made to the Ludlum 193 manual. This should be made available for review since it is listed as a reference.
2. **Item 4**—Same comment as number 1 for the Attachment 1.
3. **Item 5**—An exact background location must be specified. This must be a contamination free site that will remain reusable throughout the project.
4. **Item 5**—"Level" should be specified by units and procedures. Specify what units will be recorded for the background radiation level, for the Kerr-McGee standard, the Kerr-McGee source, etc.
5. **Item 5**—Calculation methods as in Items 5.1.4 and 5.1.5 should be specified exactly.
6. **Item 5.1.6**—Explain why 5.6 pCi/g is used for this operation.
7. **Item 5.2**—The source name and strength to be used for daily instrument checks should be given.
8. **Item 5.3.2.2**—The batteries should be replaced when their voltage reaches a certain, specified, level. It would be inappropriate to operate on batteries that died before the end of the month.

9. **Items 5.5.1 and 5.5.2**—When radioactive contamination is encountered the meter should alert. This is an expected part of surveillance and should not require cessation of operations and reporting to supervisors.

Modifications to procedures should require involvement with and concurrence from EPA before being instituted.

Attachment 3 for Air Monitoring Procedure

1. **Item 5.1.4**—Standard units corresponding to 10 CFR 20, Appendix B, namely uCi/ml, should be used instead of mCi/ml.
2. **Item 5.1.5**—Air samples should be collected at the end of each work day and read as soon as possible by the next morning. The rationale being that elevated readings should initiate an explanation and possibly a change in work practices. There should not be a week delay in instituting necessary work practices. Each day's sample should be read soon and separately for this reason. It may be possible to composite samples at the end of each week for readings of record. If this is deemed necessary, an SOP should be written and submitted to EPA for review and concurrence. Air samples should be recounted after a long decay period in order to measure long-lived radionuclides. This should be included in the SOP.
3. **Item 5.1.6**—The process used to calculate the MDA should be included.
4. **Item 5.3.2**—Specific procedures for the instruments used should be provided for review. This should include the Nuclear Chicago Model 110 and the Nuclear Chicago Spectro Shield.
5. **Item 5.3.3**—An explanation should be given for the choice of 30 and 3 minutes for counting periods.

It should be clarified if counting will be done 5 hours after the end of the work day, when air monitors are shut down, or there will be a longer wait, perhaps until the next morning.

It should be clarified if there will be a long decay period before the filters are recounted for long-lived radionuclides.

6. **Item 5.3.4.1**—What standard and procedure will be used to obtain the counter efficiency.
7. **Item 5.3.5.3**—The preferred reference are the regulations of the Nuclear Regulatory Commission.
8. **Item 5.4.1**—Some assurance should be provided in this Work Order that the Authorized Project Coordinator from STS or the designee has the background to perform actions 5.4.1.1 through 5.4.1.7.

9. **Item 5.5.1**—Rather than just stating that the air sampler should be in current calibration, the frequency of calibration should be stated as well (e.g., annual).
10. **Item 5.5.2**—"Standard operating procedures" is vague. It should be stated exactly.

Attachment 5 for site Personnel - Additional Resumes

1. **Experience..., 161 East Grand**—The first survey was performed by USEPA.
2. **OSHA 40-Hour Training**—EPA should have certificates of completion from each staff person.
3. **Eric S. Pittman**—This person will not graduate until May 1999. It should be clarified whether or not he will be part of the staff between the start of the project and his graduation date.
4. **David R. Fermin**—Appears to have little experience in radiation field work.
5. **Jeffrey E. Alicz**—Resume does not list B.S. degree with major.
6. It would be beneficial if the work assignments for each staff person were identified. Specifically, who will be in the field and who in the lab.